



SMD Education Update

**Dr. Yvonne Pendleton
NASA Science Mission Directorate**

NAC Science Meeting

**July 9, 2008
Glenn Research Center**



To share the story, the science, and the adventure of NASA's scientific explorations of our home planet, the solar system, and the universe beyond,

Conveyed through stimulating and informative activities and experiences,

Created by experts and delivered, effectively and efficiently, to learners of many backgrounds via proven conduits,

Thus providing a return on the public's investment in NASA's scientific research.



The SMD EPO Team:

Yvonne Pendleton leaves SMD July 18 (Max Bernstein becomes SMD R&A lead; eventual EPO lead and Max report to Paul Hertz, Chief Scientist)

Yvonne moves to ARC as Deputy Associate Center Director

Doris Daou leaves SMD June 27; moves to ARC as NASA Lunar Science Institute EPO lead

Larry Cooper, SMD-level EPO Representative

Hashima Hasan, Astrophysics Division

Ming-Ying Wei, Earth Science Division

Jeff Hayes/Eric Christian, Heliophysics Division

Marilyn Lindstrom, Planetary Science Division

Ruth Netting, Management and Policy Division, SMD Outreach Coordinator

Current Operating Plan



Four components plus infrastructure costs

1. Mission EPO
2. Non-Mission EPO (mid-sized projects) (~150-200K grants for 3 or 4 years)
3. Non-Mission EPO (15K grants to ~100 R&A grant winners to do EPO)
4. Other SMD EPO Investments (i.e., GLOBE Earth Science Project, GSFC visualization project, Forums)
5. Infrastructure (IPA costs, publications costs for Outreach, education product review and evaluation)



~500 projects embedded in 56 SMD missions

GLOBE (Global Learning and Observations to Benefit the Environment) Program

15 Non-Mission EPO midsized projects from 2007 call
(~150K per year for 3 years)
2008 proposals due July 15

15K Supplemental Grants to ~100 R&A PIs/year
(15K per year for up to 3 years)
Suspended in late 2007, but simplified format coming soon

EPO Forums funded through September 09

Examples of Mid-sized Projects (~150-200 K/yr)



- Teacher workshops using SMD content and resources (ATLSS)
- Middle/High School Hands-On activities and data rich exercises (SPECTRA!)
- NASA Family Nights at GSFC
- SAO and STScI MicroObservatory online telescope network
- U of Hawaii problem-based learning curriculum in planetary science
- Mini-exhibit of video vignettes and interactive computer activities related to NEOs for small science centers, libraries, web sites
- IYA exhibits, more teacher workshops, middle school/informal programs, Science on a Sphere extensions

Non-Mission Midsized EPO Projects

- 2008 proposals due July 15
- Selected 15 proposals November, 2007

Area	Proposals
Higher Education	1
E & S Education	5
Informal Education	7
Outreach	2

Abstracts posted on EPO News web page

<http://nasascience.nasa.gov/researchers/sara/epo>

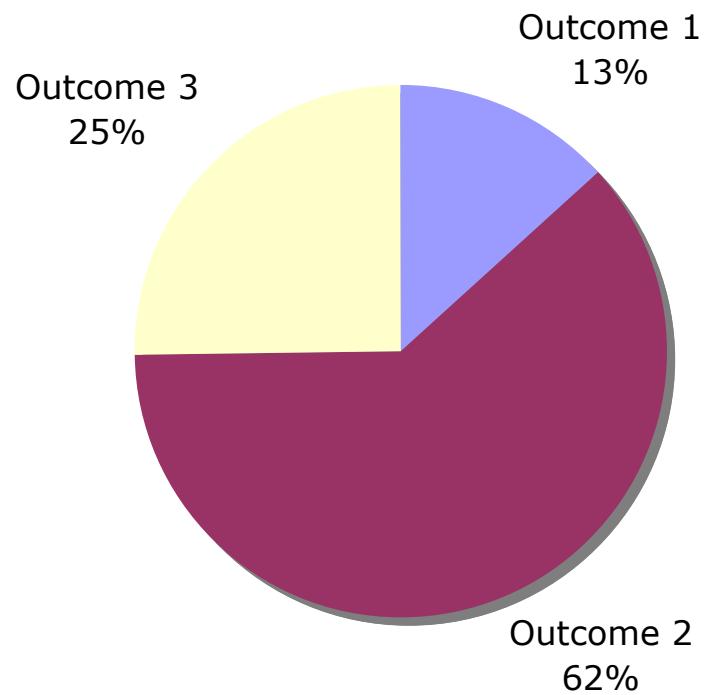


Examples of Science Supplemental Grants (15K)

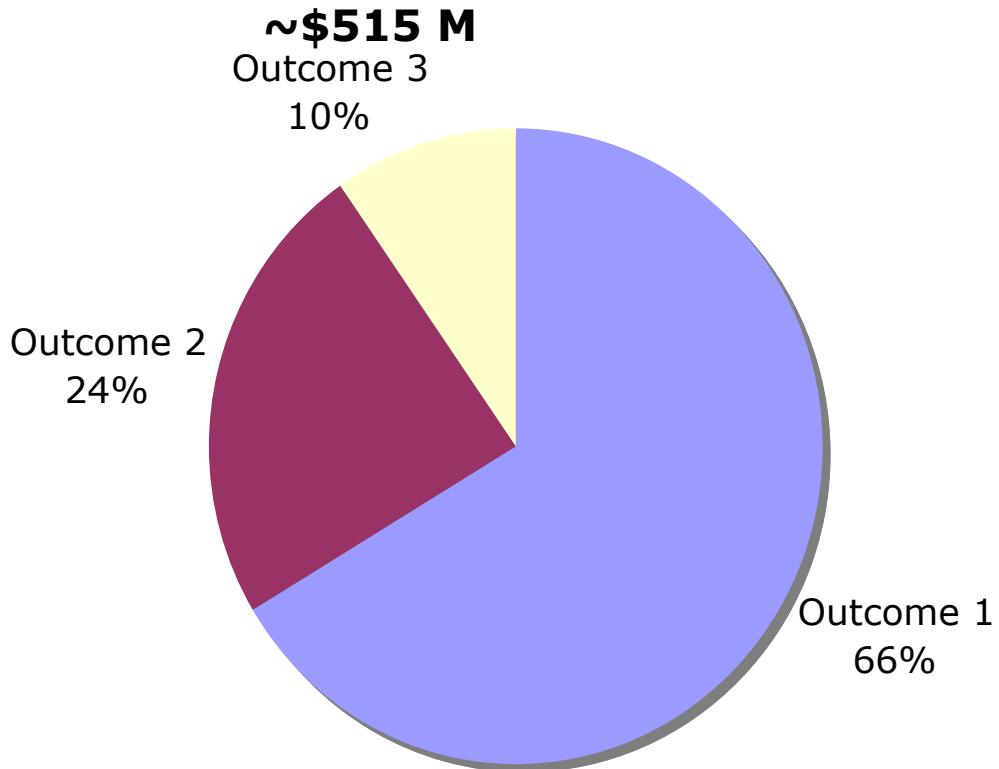
- 2 day astrobiology content enrichment for teachers at Colorado Summit using existing SMD curriculum Voyages Through Time
- 10 week student research program each summer working with scientist for three students
- Outreach Event for Middle and High School Girls with female mentors
- After-school program in geomagnetism for under-represented students
- Museum program for native Americans involving astronomy and geology
- Film developed, distributed to Montana High schools on science careers
- 5 day lunar workshop for 5-8th grade teachers (LPI + JSC)

SMD Education Portfolio

~\$25M



SMD Education with R&A Investment



R&A / EPO: Communication

Website for Research Programs and EPO News

- One stop shopping for all R&A and EPO needs
- Has budget FAQs and Grant Stats
- Contact info for every Program Officer
- Division Corners has an explanation of each division handles R&A
- Dynamic website with new pages and data added often

Google NASA SARA or go to:

<http://nasascience.nasa.gov/researchers/sara>

SARA email: 1800 since April 2007 (sara@nasa.gov)

SARA visits: Universities, Science conferences, Centers, Committees

E/PO: MOWG

- Members from all four SMD science communities.
- Telecons weekly; 2-day meeting in DC Mar. 6-7
- Contact Emily CoBabe-Ammann with any questions (303-735-5814)

Emily CoBabe-Ammann (chair)	U. Colorado EcoBabe@lasp.colorado.edu	Higher education
Edna DeVore	SETI Institute	K-12 formal, Evaluation
Jennifer Grier	Planetary Science Institute	Scientist involvement, Forums
Mario Livio	Space Telescope Science Institute	Scientist outreach
Leslie Lowes	JPL	Forums
Mike Newchurch	U. Alabama - Huntsville	Higher education
Patricia Reiff	Rice U.	Informal
Stephanie Stockman	GSFC	New media, Earth sciences

EPO Science Supplemental Grants (programmatic changes under consideration)



- 15 K each, but combined efforts likely permitted
- PI Scientists encouraged to partner with EPO professionals, but not required
- Due Dates twice a year to reduce workload on all
- Two separate pathways: Outreach and Education
- Simplified peer reviewed evaluation of Outreach Proposals (perhaps mail in reviews only)

All percentages are percentages of the PI mission cost (i.e, the cost cap).

E/PO budget requirements: minimum 1% for core E/PO, no maximum within the cost cap.

Student Collaboration (SC) included in E/PO, remains optional (But since there is no max on E/PO, there is no max on SC).

PI can have up to 1% above the cost cap for SC. If the SC costs more than 1%, then the rest of the SC cost is within the cost cap.

NASA's Contribution to IYA Efforts

NASA's Approach

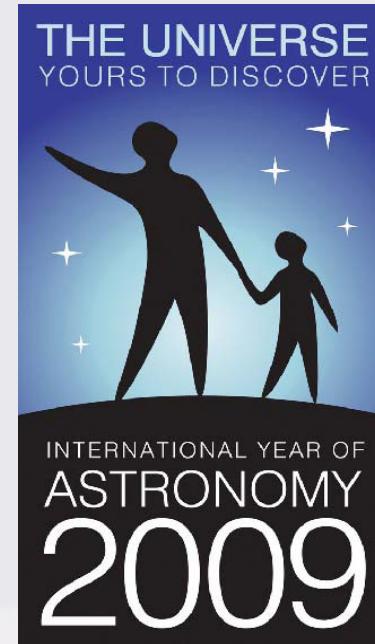
Capitalize on public interest in NASA's science discoveries and missions to support US IYA goals.

Convey observation and exploration as an ongoing human endeavor.

Align with US themes and working group activities.

Central website portal with **monthly highlights** that provides a framework for planning.

- Topic related to key events and activities
- Celestial objects to observe
- NASA space science mission events
- Events for students, educators, and the public
- Related resources and activities for educators and families



NASA's IYA Website: astronomy2009.nasa.gov

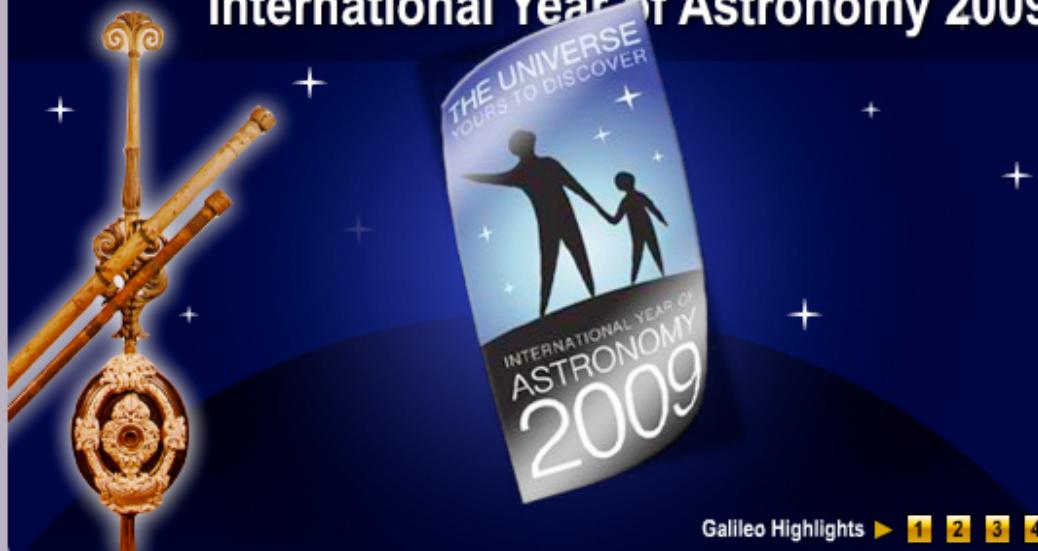


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HOME NEWS CALENDAR AND EVENTS RESOURCES MISSION DISCOVERIES

International Year of Astronomy 2009

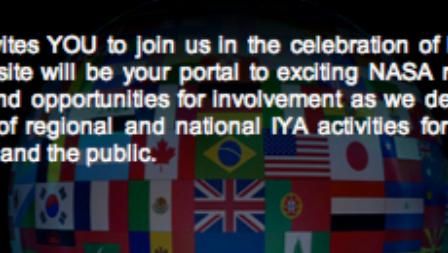


Galileo Highlights ► 1 2 3 4

Discover the Universe with NASA during the 2009 International Year of Astronomy!

In 2009 we celebrate the 400th anniversary of Galileo's first observations of the universe through a telescope. In honor of this early event, the International Astronomical Union (IAU) and the United Nations have proclaimed 2009 as the International Year of Astronomy to spread awareness of astronomy's contributions to society and culture, stimulate young people's interest in science, portray astronomy as a global peaceful endeavor, and nourish a scientific outlook in society.

NASA Invites YOU to join us in the celebration of IYA 2009. This website will be your portal to exciting NASA resources, events, and opportunities for involvement as we develop our program of regional and national IYA activities for students, teachers, and the public.



Additional links:



International Year
of Astronomy 2009
(Global)



International Year
of Astronomy 2009
(United States)



American
Astronomical
Society



International
Astronomical
Union

- + USA.gov - The U.S. government's official web portal.
- + Freedom of Information Act
- + Budgets, Strategic Plans and Accountability Reports
- + The President's Management Agenda
- + Privacy Policy and Important Notices
- + Inspector General Hotline
- + Equal Employment Opportunity Data Posted Pursuant to the No Fear Act
- + Information-Dissemination Priorities and Inventories



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+ Contact NASA